3.3.3.7 Wet-Mesic Prairie

3.3.3.7.1 Community Overview

This herbaceous grassland community is dominated by tall grasses, including big bluestem, Canada bluejoint grass, cordgrass, and Canada wild-rye. The forb component is diverse and includes azure aster, Eastern shooting-star, sawtooth sunflower, prairie blazing-star, prairie phlox, prairie coneflower, prairie docks, late and stiff goldenrods, and culver's-root. This community type was common historically but now is rare. Well over 99% of our tallgrass prairies – including wet-mesic prairie – have been destroyed.

Wet-mesic prairie sometimes occurred in large wetland complexes with wet prairie, southern sedge meadow, calcareous fen, and emergent marsh communities. It was most abundant on level or gently rolling glacial moraine or outwash landforms where there were few natural barriers to wild fire, and where the upland vegetation was composed mostly of fire-dependent communities such as Mesic prairie and Oak opening.

3.3.3.7.2 Vertebrate Species of Greatest Conservation Need Associated with Wet-Mesic Prairie

Twenty-three vertebrate Species of Greatest Conservation Need were identified as moderately or significantly associated with wet-mesic prairie (Table 3-96).

Table 3-96. Vertebrate Species of Greatest Conservation Need that are (or historically were) moderately or significantly associated with wet-mesic prairie communities.

Species Significantly Associated with Wet-Mesic Prairie
Birds
Northern Harrier
Greater Prairie-chicken
Short-eared Owl
Bobolink
Herptiles
Pickerel Frog
Butler's Garter Snake
Eastern Massasauga Rattlesnake
Species Moderately Associated with Wet-Mesic Prairie
Birds
Blue-winged Teal
Northern Bobwhite
American Golden Plover
Upland Sandpiper
Marbled Godwit
Buff-breasted Sandpiper
Barn Owl
Willow Flycatcher
Bell's Vireo
Field Sparrow
Henslow's Sparrow
Le Conte's Sparrow
Eastern Meadowlark
Herptiles
Blanding's Turtle
Western Ribbon Snake
Mammals
Franklin's Ground Squirrel

In order to provide a framework for decision-makers to set priorities for conservation actions, the species identified in Table 3-96 were subject to further analysis. The additional analysis identified the best opportunities, by Ecological Landscape, for protection, restoration, and/or management of both wet-mesic prairie and associated vertebrate Species of Greatest Conservation Need. The steps of this analysis were:

- Each species was examined relative to its probability of occurrence in each of the 16 Ecological Landscapes in Wisconsin. This information was then cross-referenced with the opportunity for protection, restoration, and/or management of wet-mesic prairie in each of the Ecological Landscapes (Tables 3-97 and 3-98).

- Using the analysis described above, a species was further selected if it had both a significant association with wet-mesic prairie and a high probability of occurring in an Ecological Landscape(s) that represents a major opportunity for protection, restoration and/or management of wet-mesic prairie. These species are shown in Figure 3-13.

Table 3-97. Vertebrate Species of Greatest Conservation Need that are (or historically were) *significantly* associated with wet-mesic prairie communities and their association with Ecological Landscapes that support wet-mesic prairie.

Wet-Mesic Prairie	Birds (4)*				Herptiles (3)		
Ecological Landscape grouped by opportunity for management, protection, and/or restoration of this community type	Northern Harrier	Greater Prairie-Chicken	Short-eared Owl	Bobolink	Pickerel Frog	Butler's Garter Snake	Eastern Massasauga Rattlesnake
MAJOR							
Central Sand Hills							
Southeast Glacial Plains							
Southern Lake Michigan Coastal							
IMPORTANT							
Southwest Savanna							
Western Coulee and Ridges							
PRESENT (MINOR)							
Central Sand Plains							

Color Key

= **HIGH probability the species occurs in this Ecological Landscape**

= **MODERATE probability the species occurs in this Ecological Landscape**

= **LOW or NO probability the species occurs in this Ecological Landscape**

*** The number shown in parentheses is the number of Species of Greatest Conservation Need from a particular taxa group that are included in the table. Taxa groups that are not shown did not have any Species of Greatest Conservation Need that met the criteria necessary for inclusion in this table.**

Table 3-98. Vertebrate Species of Greatest Conservation Need that are (or historically were) *moderately* associated with wet-mesic prairie communities and their association with Ecological Landscapes that support wet-mesic prairie.

Wet-Mesic Prairie

Ecological Landscape grouped by opportunity for management, protection, and/or restoration of this community type	Birds (13)*													Herptiles (2)		Mammals (1)
	Blue-winged Teal	Northern Bobwhite	American Golden Plover	Upland Sandpiper	Marbled Godwit	Buff-breasted Sandpiper	Barn Owl	Willow Flycatcher	Bell's Vireo	Field Sparrow	Henslow's Sparrow	Le Conte's Sparrow	Eastern Meadowlark	Blanding's Turtle	Western Ribbon Snake	Franklin's Ground Squirrel
MAJOR																
Central Sand Hills	■	■	■	■				■		■	■	■	■	■		■
Southeast Glacial Plains	■	■	■	■	■	■		■	■	■	■		■	■		■
Southern Lake Michigan Coastal	■				■	■		■	■	■	■		■	■		■
IMPORTANT																
Southwest Savanna	■	■	■	■		■		■	■	■	■		■	■		■
Western Coulee and Ridges	■	■	■	■		■		■	■	■	■		■	■		■
PRESENT (MINOR)																
Central Sand Plains	■		■	■				■		■	■	■	■	■		■

Color Key

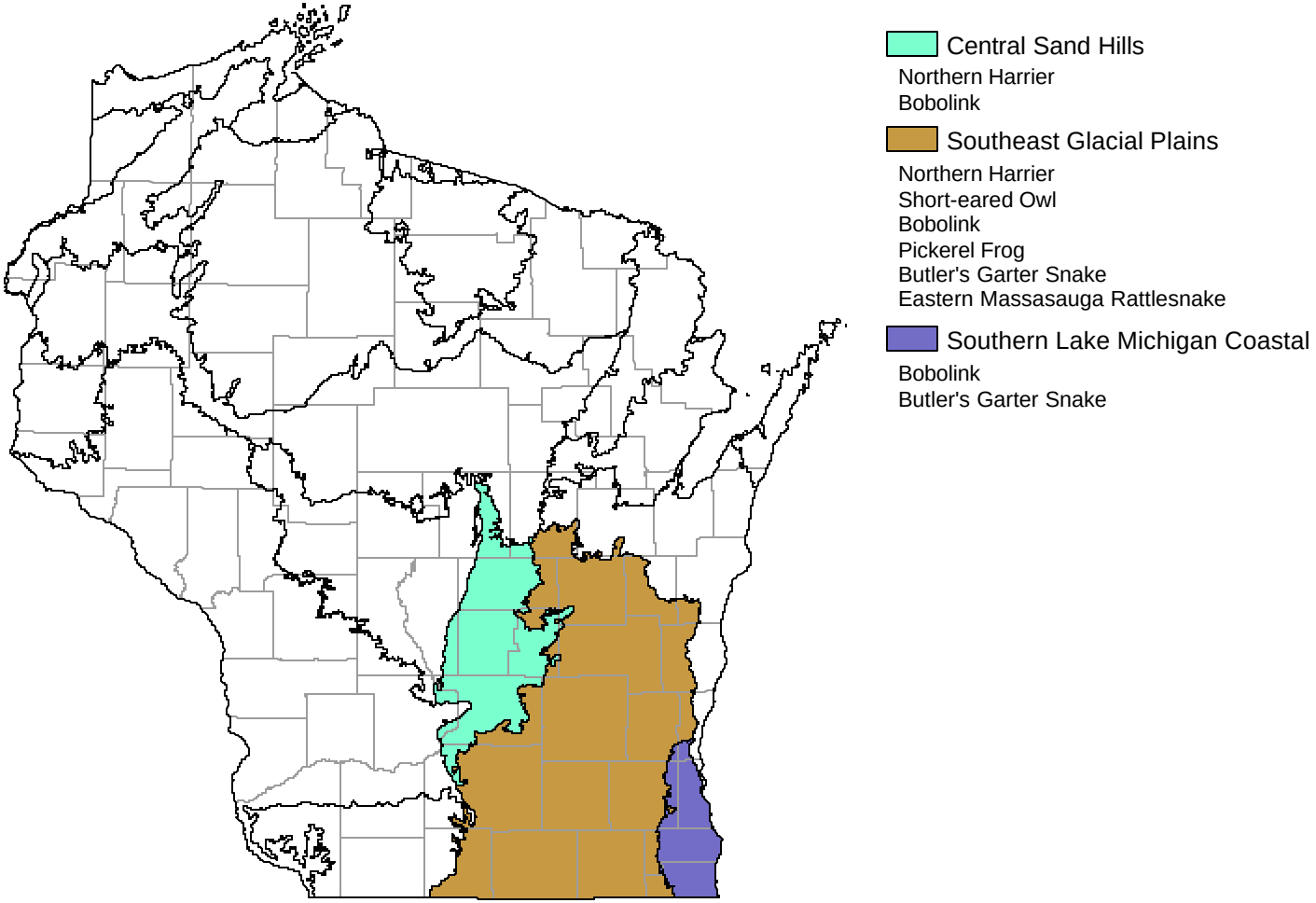
■ = **HIGH probability the species occurs in this Ecological Landscape**

■ = **MODERATE probability the species occurs in this Ecological Landscape**

□ = **LOW or NO probability the species occurs in this Ecological Landscape**

*** The number shown in parentheses is the number of Species of Greatest Conservation Need from a particular taxa group that are included in the table. Taxa groups that are not shown did not have any Species of Greatest Conservation Need that met the criteria necessary for inclusion in this table.**

Figure 3-17. Vertebrate Species of Greatest Conservation Need that have *both* a significant association with wet-mesic prairie *and* a high probability of occurring in an Ecological Landscape(s) that represents a major opportunity for protection, restoration and/or management of wet-mesic prairie.



3.3.3.7.3 Threats and Priority Conservation Actions for Wet-Mesic Prairie

3.3.3.7.3.1 Statewide Overview of Threats and Priority Conservation Actions for Wet-Mesic Prairie

The following list of threats and priority conservation actions were identified for wet-mesic prairie in Wisconsin. The threats and priority conservation actions described below apply to all of the Ecological Landscapes in Section 3.3.73.3.3.2 unless otherwise indicated.

Threats and Issues

- Many sites of this community type were historically converted to agricultural uses through drainage and degraded by pasturing. Grazing can cause simplification (e.g., increase of aggressive native plants such as wild sunflowers, asters, Joe-pye weed, and stinging nettles, at the expense of other species) and encourage the expansion of invasive non-native plants. Most grazing occurred in the past, but some remnants are still grazed. Long-term grazing renders these sites unrestorable.
- Most remaining sites are small and isolated and are difficult to manage.
- Managing for invertebrates is needed but complicates management.
- Genetic diversity may be declining, as is species diversity.
- Invasive plants such as reed canary grass, purple loosestrife, and wild parsnip are a major problem and can out-compete and replace native species.
- Conversion of prairie to woody species is also a major problem. Wet-mesic prairie is prone to serious and relatively rapid encroachment by woody plants in the absence of fire.
- More information is needed to manage the full range of natural variability of this community type.
- Land use planning that is not comprehensive and does not emphasize conservation considerations can lead to development in locations that limit options for restoring and managing this community. Housing developments and other forms of urban expansion can limit the opportunity to manage with prescribed fire.

Priority Conservation Actions

- Preserve and manage remaining sites.
- Restore existing degraded sites of this community type, emphasizing restoration of hydrology. Revegetate suitable sites, where remnants make this worthwhile.
- Promote private management (e.g., Prairie Enthusiasts) of small sites where possible. Offer incentives to private landowners for preservation or restoration of this community type.
- Manage this community type within a matrix of surrogate prairie grasslands and other open habitats for area sensitive species, and for those species that utilize different vegetation types at different stages in their life cycles. Link habitats to allow for dispersal and gene flow.
- Consider needs of fire-sensitive invertebrates when burning and burn only part of a site each year, except in the early stages of planted prairie reconstructions. Follow existing WDNR management guidelines for prescribed burning to minimize impacts on sensitive species.
- Develop educational tools and demonstration areas that promote benefits of prescribed fire, and address liability concerns.
- Provide incentives to prevent grazing and control or eliminate invasives.
- Control runoff from surrounding agricultural areas that may contribute nutrients and sediment, which can encourage invasive species. Limit herbicide drift from surrounding agricultural areas that can lead to changes in species composition and encourage invasive plants.
- Continue and support research to find biocontrols for invasives; control spread of new invasives.
- Monitor these sites to determine whether management is maintaining native diversity.

3.3.3.7.3.2 Additional Considerations for Wet-Mesic Prairie Ecological Landscape

Special considerations have been identified for those Ecological Landscapes where major or important opportunities for protection, restoration, and/or management of wet-mesic prairie exist. Those considerations are described below and are in addition to the statewide threats and priority conservation actions for wet-mesic prairie found in Section 3.3.7.3.3.3.1.

Additional Considerations for Wet-Mesic Prairie in Ecological Landscapes with ***Major*** Opportunities for Protection, Restoration, and/or Management

Central Sand Hills

There are significant management opportunities for wet-mesic prairie in this Ecological Landscape. Opportunities and examples of this type occur at Comstock and Germania Marshes, Fountain Creek Prairie, and Muir Park State Natural Area (all in Marquette County).

Southeast Glacial Plains

This community type formerly existed in swales between drumlins, on borders of sedge meadows along lakes and streams (e.g., Bark River, Sugar River, Scuppernong Creek, Crawfish River), and in abandoned river channels. The largest and most diverse remnants are in the southern part of the Kettle Moraine region; there is an opportunity for managing wet-mesic prairie along with other wetland types, mesic prairie, and oak opening. Most grazing occurred in the past, but some remnants are still grazed; grazing should be discontinued because long-term grazing renders these sites unrestorable. Sedimentation, pollution, and herbicide drift from surrounding agricultural areas are important considerations in this Ecological Landscape that can lead to changes in composition and encourage invasive plants. There may be some large-scale management opportunities at Faville Prairie (Jefferson County) and Waterloo Wildlife Management Area (Jefferson and Dodge Counties) to manage this type with other marsh, sedge meadow and surrogate prairie grassland communities. Other opportunities to manage for this type occur at Young Prairie State Natural Area (Jefferson and Walworth Counties), White River State Wildlife Management Area and Puchyan Prairie (Green Lake County), Scuppernong and Snapper Prairies (Jefferson County), and Kettle Moraine Low Prairie (Waukesha County)

Southern Lake Michigan Coastal

Increasing population associated with metropolitan areas is causing rapidly increasing development. Most sites are small and isolated. An exception is Chiwaukee Prairie, which is one of only a very few large occurrences of wet-mesic prairie in the state. Wet-mesic prairie is the most prevalent community type at Chiwaukee Prairie, a complex that also includes wet prairie, mesic prairie, calcareous fen, southern sedge meadow, and oak openings. Coordinated management of Chiwaukee Prairie with Illinois Beach State Park should be explored. Invasive plants are a problem in this Ecological Landscape. Encroachment by woody shrubs (e.g., gray and red-osier dogwoods) is also a problem. Sedimentation and pollution from surrounding agricultural and urban areas are important considerations in this Ecological Landscape and can lead to changes in composition and encourage invasive plants, especially in the smaller isolated sites.

Additional Considerations for Wet-Mesic Prairie in Ecological Landscapes with ***Important*** Opportunities for Protection, Restoration, and/or Management

Southwest Savanna

This type is rare in this Ecological Landscape but a few restoration possibilities exist. There are some sites of less than an acre in size that occur along river corridors that have expansion possibilities.

Western Coulees and Ridges

This type is rare in this Ecological Landscape. Past conversion to agriculture has impacted nearly all former wet-mesic prairies. All sites are small and isolated, with the notable exception of Avoca Prairie in Iowa County. Sites should be preserved, buffered, and enlarged where they exist. Connectivity should be maintained or restored where possible. Restoration of wet-mesic prairie is also needed. There are some small, brushy remnants in the Baraboo River Valley. Additional survey work there and in some of the other river valleys might yield positive results, although the vast majority of the lowlands have been converted to agricultural uses.